

IN THE CLAIMS:

Please amend the claims as follows:

Claim 1 (Currently Amended): A staple remaining amount detecting apparatus in an electric stapler, used in an electric stapler comprising a staple cartridge provided attachably and detachably to and from a magazine portion of a stapler main body for containing sheet-like staples each constituted by connecting a number of staples in a straight form in a sheet-like shape in a stacked state, wherein the staples are guided out to outside of an opening portion of a lower end portion of a front wall of the cartridge main body successively from a lower end portion of the sheet-like staples, comprising:

an engaging plate arranged at an upper portion of the cartridge main body and engaged with the sheet-like staple at a topmost portion; and

a position detecting mechanism ~~provided on a side of the cartridge main body~~ for detecting a position of the engaging plate,

wherein a remaining amount of the sheet-like staples is detected based on the detection of the position of the engaging plate by the position detecting mechanism.

Claim 2 (Previously Presented): The staple remaining amount detecting apparatus in an electric stapler according to claim 1, wherein the position detecting mechanism comprises a plurality of conductors and an output terminal provided at each of the conductors, wherein the engaging plate is provided with an electrode made to be movable along the

conductors while being brought into contact with each of the conductors, and
wherein the position of the engaging plate is detected based on a value of a voltage
measured across the output terminals, and the remaining amount of the sheet-like staples is
detected based on the detection of the position of the engaging plate.

Claim 3 (Previously Presented): The staple remaining amount detecting apparatus in an
electric stapler according to claim 1, wherein the position detecting mechanism comprises a
portion of transmitting and a portion of reflecting light,

wherein the engaging plate is provided with an optical sensor, and
wherein the position of the engaging plate is detected by numbers of times of transmitting
and cutting off light irradiated to the portion of transmitting and the portion of reflecting light,
respectively, and the remaining amount of the sheet-like staples is detected based on the
detection of the position of the engaging plate.

Claim 4 (Currently Amended): A staple remaining amount detecting apparatus in an
electric stapler, used in an electric stapler comprising a staple cartridge provided attachably and
detachably to and from a magazine portion of a stapler main body for containing a number of
staples each in a straight form and wound in a roll-like shape, wherein the staples are
successively guided out to outside of an opening portion of the cartridge main body from the
staple at a front end portion, comprising:

an engaging plate arranged at an upper portion of the cartridge main body and engaged with an upper end of the roll-like staple; and
a position detecting mechanism ~~provided on a side of the cartridge main body~~ for detecting a position of the engaging plate,

wherein a remaining amount of the roll-like staples is detected based on the detection of the position of the engaging plate by the position detecting mechanism.

Claim 5 (Previously Presented): The staple remaining amount detecting apparatus in an electric stapler according to claim 4, wherein the position detecting mechanism comprises a plurality of conductors and an output terminal provided at each of the conductors, wherein the engaging plate is provided with an electrode made to be movable along the conductors while being brought into contact with each of the conductors, and wherein the position of the engaging plate is detected based on a value of a voltage measured across the output terminals, and the remaining amount of the roll-like staples is detected based on the detection of the position of the engaging plate.

Claim 6 (Previously Presented): The staple remaining amount detecting apparatus in an electric stapler according to claim 4, wherein the position detecting mechanism comprises a portion of transmitting and a portion of reflecting light, wherein the engaging plate is provided with an optical sensor, and

wherein the position of the engaging plate is detected by numbers of times of transmitting and cutting off light irradiated to the portion of transmitting and the portion of reflecting light, respectively, and the remaining amount of the roll-like staples is detected based on the detection of the position of the engaging plate.

Claim 7 (Previously Presented): The staple remaining amount detecting apparatus in an electric stapler according to claim 1, wherein the position detecting mechanism provides an electrical signal based on the detection of the position of a projected portion of the engaging plate.

Claim 8 (Previously Presented): The staple remaining amount detecting apparatus in an electric stapler according to claim 7, wherein the position detecting mechanism comprises a plurality of conductors and an output terminal provided at each of the conductors, wherein the engaging plate is provided with an electrode made to be movable along the conductors while being brought into contact with each of the conductors, and wherein the position of the engaging plate is detected based on a value of a voltage measured across the output terminals, and the remaining amount of the sheet-like staples is detected based on the detection of the position of the engaging plate.

Claim 9 (Previously Presented): The staple remaining amount detecting apparatus in an

electric stapler according to claim 7, wherein the position detecting mechanism comprises a portion of transmitting and a portion of reflecting light,

wherein the engaging plate is provided with an optical sensor, and

wherein the position of the engaging plate is detected by numbers of times of transmitting and cutting off light irradiated to the portion of transmitting and the portion of reflecting light, respectively, and the remaining amount of the sheet-like staples is detected based on the detection of the position of the engaging plate.

Claim 10 (Previously Presented): The staple remaining amount detecting apparatus in an electric stapler according to claim 4, wherein the position detecting mechanism provides an electrical signal based on the detection of the position of a projected portion of the engaging plate.

Claim 11 (Previously Presented): The staple remaining amount detecting apparatus in an electric stapler according to claim 10, wherein the position detecting mechanism comprises a plurality of conductors and an output terminal provided at each of the conductors, wherein the engaging plate is provided with an electrode made to be movable along the conductors while being brought into contact with each of the conductors, and wherein the position of the engaging plate is detected based on a value of a voltage measured across the output terminals, and the remaining amount of the roll-like staples is

detected based on the detection of the position of the engaging plate.

Claim 12 (Previously Presented): The staple remaining amount detecting apparatus in an electric stapler according to claim 10, wherein the position detecting mechanism comprises a portion of transmitting and a portion of reflecting light,

wherein the engaging plate is provided with an optical sensor, and

wherein the position of the engaging plate is detected by numbers of times of transmitting and cutting off light irradiated to the portion of transmitting and the portion of reflecting light, respectively, and the remaining amount of the roll-like staples is detected based on the detection of the position of the engaging plate.

Claim 13 (Previously Presented): The staple remaining amount detecting apparatus in an electric stapler according to claim 1, wherein the position detecting mechanism detects at least three positions of the engaging plate; and

a remaining amount of the sheet-like staples is detected based on the detection of the at least three positions of the engaging plate.

Claim 14 (Previously Presented): The staple remaining amount detecting apparatus in an electric stapler according to claim 4, wherein the position detecting mechanism detects at least three positions of the engaging plate; and

a remaining amount of the roll-like staples is detected based on the detection of the at least three positions of the engaging plate.

Claim 15 (New): The staple remaining amount detecting apparatus in an electric stapler according to claim 7, wherein the electrical signal is a voltage that is variable based on the position of the engaging plate.

Claim 16 (New): The staple remaining amount detecting apparatus in an electric stapler according to claim 10, wherein the electrical signal is a voltage that is variable based on the position of the engaging plate.

Claim 17 (New): The staple remaining amount detecting apparatus in an electric stapler according to claim 7, wherein the position detecting mechanism detects the position of the engaging plate by counting electrical signals.

Claim 18 (New): The staple remaining amount detecting apparatus in an electric stapler according to claim 10, wherein the position detecting mechanism detects the position of the engaging plate by counting electrical signals.